

Testosterone boosting lead constituent from Tongkat Ali as the active ingredient for the prototype product of Men Hormone Generator (MHG)

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Patent filed:

- IP number (PI 2020005773)

Product Background



- Shown above a prototype of a product known as Men Hormone Generator (MHG).
- The prototype is the yield of R&D&C efforts in valorization of an important traditional medicine of Malaysia i.e. Tongkat Ali.

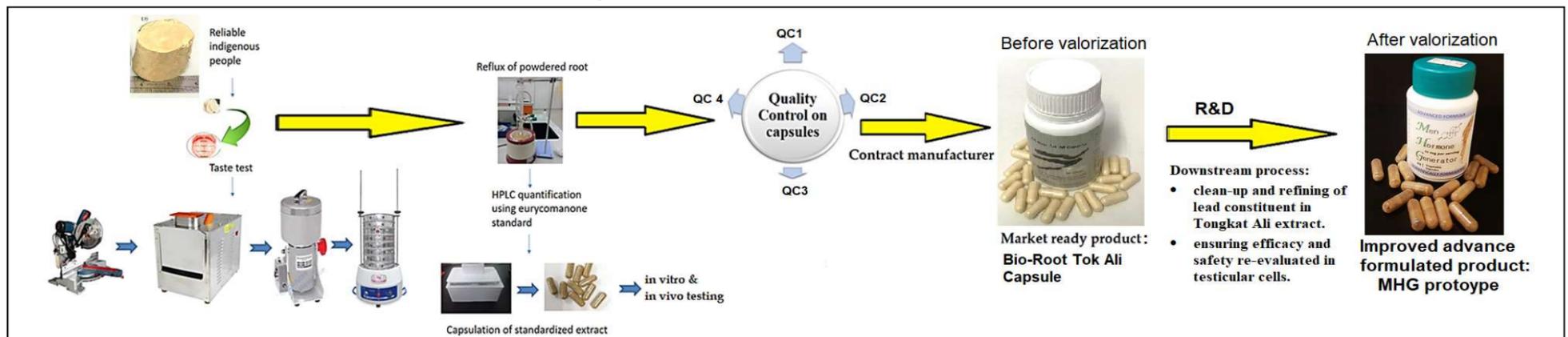
State of the Art/ Methods

- Patent filed (PI 2020005773) on method for isolating lead constituent from extract of *Eurycoma longifolia* (Tongkat Ali) using affinity chromatography.
- Method enables ease in fractionating the lead constituent from the unwanted organic micro-constituents (<1 kDa) with the use of only two step-chromatography techniques.
- The scale-up from laboratory columns to industrial columns expected with higher yield with lowering of production costs.

Benefits/Usefulness/Applicability

- Testosterone is the male hormone required for men's health.
- Over age adult men decreased in testosterone blood level causing increase in fat mass compared to lean muscles.
- MHG proven to boost testosterone.

Product Image and Product Characteristics/Results



Marketability & Commercialisation

Who are the potential users of the product?

- General ageing male population or any male requiring testosterone booster.
- Male athletes or any male seeking natural muscle mass increase.

What is the size of the target market and what is the targeted market share?

- Products sold solely by online market due to male buyers preference of being discrete of their purchase. e.g. FB ads; mudah.my; lazada; shopee, ebay etc.

Novelty/ Originality/ Inventiveness

- Valorization from existing product of Bio-Root Tok Ali Capsule to that of the prototype of MHG.
- Removal of contaminant improves efficacy using lower dose of 50 mg instead of 250 mg per capsule.

Status of Innovation

- Prototype at the stage of TRL4 or TRL 5.
- Done with laboratory testing of active ingredient and currently testing the prototype after being incapsulated.

Cost Analysis

- Bio-Root Tok Ali Capsules (before valorization) sold at price of RM69 – RM79 per bottle of 60 capsules. Each capsule containing 250mg active ingredient.
- MHG prototype expected to be priced at RM89 to RM99 due to valorization efforts giving value added improvements. Each capsule containing only 50 mg active ingredient.

Community Impact

- Tongkat Ali root permissible to be sourced in jungle only by indigenous people hence MHG provides income to them.

MHG is expected to be a better version of Bio-Root Tok Ali Capsule.

Valorization with patented (still pending approval) methodology led to inclusion of lead constituent alone.



versus



This is a commercially successful product (name been de-identified).

Claimed undergone a patented extraction process to capture active EuryPeptides.

Achievement/Award

- ITEX20 – Gold Medal (represented UMP)
- Citrex and AiNEX 2017-Gold Awards (Student category)
- Citrex 2020 – Gold Medal (Staff category)
- Project awarded with MTUN Grant: UIC191201 (Completed)
- Project awarded for Product Development Grant: PDU203209 (On-going).
- Patent filed with title: Method For Isolating Glycosylated Proteins From Extract Of *Eurycoma longifolia* (Tongkat Ali) (PI 2020005773)

Collaboration/Industrial Partner

- Industrial Biotech Ent. (CA0277665-M) for product registration with MOH. Company website URL: <http://industrialbiotechenterprise.simplesite.com/440006354>
- UMP Technology Sdn Bhd for marketing and sales partnership.

Selected Publications

- Tongkat Ali Plants Of *Eurycoma longifolia* And *Stema Tuberosa* Stimulate Sexual Arousal In Domestic Cocks, Malaysian Journal of Science (2020) 39(1): 1-14.
- Marker to authenticate *Eurycoma longifolia* (Tongkat Ali) containing aphrodisiac herbal products, Current science (2018) 115 (5): 886-894.
- Detection and quantification of eurycomanone levels in Tongkat Ali herbal products, Journal of Applied Sciences (2015) 15 (7): 999.
- Review on *Eurycoma longifolia* pharmacological and phytochemical properties, Journal of Applied Sciences (2015) 15 (6): 831.
- Protein markers useful in authenticating *Eurycoma longifolia* contained herbal aphrodisiac products, Malaysian Journal of Science (2013) 32 (1): 15-23.